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Business Graphics • T1 Communications

Managing Microcomputers • The IS Payoff

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. . . If It Were Only This Easy!

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Circulation
Group Circulation Manager: Elen Cowles
Circulation Supervisor: Carol Tratar
Asst. Circulation Supervisor: Karen Johnson

Editorial Offices
Headquarters: Hitchcock Building
Wheaton, IL 60188, (312) 665-1000
PO Box 337
Brookline, MA 02146, (617) 723-8970
1600 Woolsey St.
Berkeley, CA 94703, (415) 528-1320
Jan Snyders
PO Box 187
Lockport, IL 60441, (815) 485-8962

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25W550 Geneva Rd., Wheaton, IL 60188
President, Loren M. Walsh
Phone: (312) 665-1000 Cable: HITCHPUB
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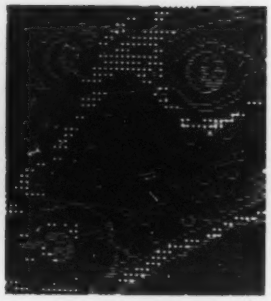

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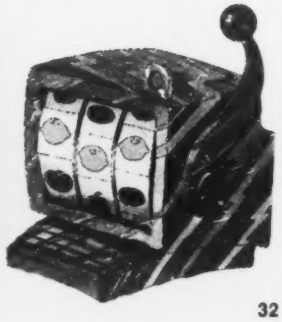

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Information Storage & Retrieval Survey

MODERATION IN ALL THINGS

With optical disks still a curiosity, current tape, disk and micrographic systems are being sustained or only minimally expanded.

■ *By Mary S. Esparza*
Assistant Editor

Maintaining current storage systems rather than expanding them is a growing trend in companies. At the same time, an inkling of interest in optical disk storage is becoming evident. These are among the findings of INFOSYSTEMS' Information Storage & Retrieval Survey.

"We are more interested in optical [disk storage] than in the past," comments one respondent. "Cartridge systems are too expensive and conversion too much of a problem for a shop that is now substantially on-line."

Yet another respondent writes: "Optical disk sounds good, but cost, flexibility and interface to nonIBM systems are all concerns." Advises another respondent, "Continue following developments in optical storage. We'll be getting serious about it in 1988 or so."

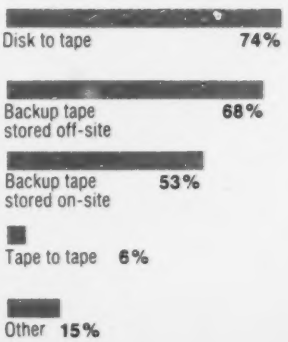
Use of optical disk appears to be hampered by high cost and a lack of knowledge about the technology. But respondents are curious nonetheless. One reader requests information on optical disk storage for a small user while another wants to know the latest developments in the write-once-read-mostly technology. One reader seems wary of optical disk technology because "the system is not perfected or standardized."

"What are the boundaries for the practical usage of CDROM [compact disk read only memory] or laser-disk technology?" asks another. "Based on the read-only capability, I believe it is being pushed far harder and farther than is justified."

Another respondent has a tall order: a low-cost storage system that would provide convenient information storage and access. "Why can't anyone develop a midsize, inexpensive system to take magnetic media and transfer it to optical storage like COM [computer-output microfilm transfers] magnetic media to fiche? Preferably this system would be channel attached (IBM CPU) like on-line COM and allow on-line (via CICS) retrieval of reports as if they came from a power queue or other CICS inquiry. Oh, the convenience and power of retrieval then!"

The survey was conducted by Hitchcock Marketing & Research Services, Wheaton, IL. Of the 3,000 surveys mailed, 607 responses were re-

Information Backup Systems Used



Plans for Information Storage & Retrieval

	DASDs	Tape	Microfilm/ fiche
Expand	47%	15%	26%
Expand & replace	13%	7%	3%
Replace current system	4%	11%	3%
Maintain current system	36%	68%	69%

ceived, a 20 percent return. The survey was sent to a random sampling of individuals pulled from INFOSYSTEMS' circulation. As an expansion of INFOSYSTEMS' annual micrographics survey conducted for the past 17 years, the intention of this study was to gather information on a range of data- and document-storage methods. Past surveys were directed only at individuals who use micrographics systems. (For information on micrographics, see the sidebar to this story.)

"Optical disk is used by less than one percent right now, but it is a promising technology," says Ray Winkler, manager of market research at Hitchcock Marketing & Research Services. "Many made comments that they will be looking into this technology in the next few years."

Although few companies are replacing their current storage systems, expansion of operations in the next year will be moderate, reveals the study: 47 percent will expand direct access storage device (DASD) systems; 15 percent plan to expand tape systems; and 26 percent will expand microfilm/fiche systems. Of the respondents surveyed, 36 percent say they plan to maintain their current DASD system, 68 percent plan to continue using their current tape system and 69 percent intend to sustain their micrographics system.

Similarly, the projections for storage and retrieval means for the next year will largely remain the same, according to the study. The majority of reel-to-reel drive users (75 percent) plan to keep the same amount of equipment, 15 percent intend to increase this means of storage and 10 percent project to decrease the use of this medium. The most significant change expected is in the DASD drives arena, with 58 percent planning to increase the number they will be using.

Small firms (100 to 249 employees) are as likely to increase their number of DASD drives as they are to sustain the ones they have. Eighty percent of the large firms (1,000 or more employees), however, plan to increase their number of DASDs. In a breakdown by industry, utilities/communications companies and wholesale/retail businesses are the most active, with more than 70 percent of the firms in these categories planning to increase DASD use.

Overall, the study reveals magnetic disk as the most widely used storage medium (97 percent). Ninety percent of the respondents use magnetic tape and 62 percent claim to use microfilm/fiche. Only .3 percent of the respondents—two of the 607—are using optical disk.

Approximate Expenditures on Information Storage & Retrieval
(in thousands of dollars)

	1986	1987
Micrographics		
% spending >$1	46%	47%
Average dollars	40	46
Optical disk		
% spending >$1	.01%	.03%
Average dollars	95	43
Magnetic media		
% spending >$1	84%	85%
Average dollars	126	145
Total average dollars for the year	133	153

Banks continue to be the biggest users, with 61 percent of those responding claiming to use some form of information storage and retrieval system. Other users above the 50 percent participation mark are finance (59 percent), utility and communications (58 percent), and transportation (51 percent).

The type of computer tape system used by 96 percent of the respondents is reel-to-reel. Fifteen percent of those users plan to increase their use of this storage method, while 75 percent intend for it to remain the same.

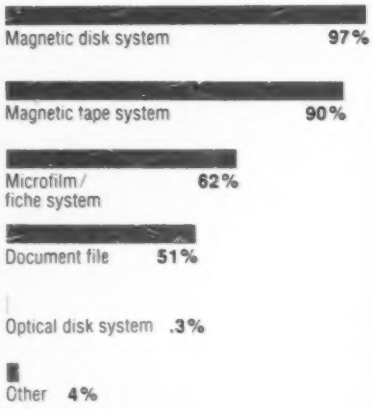
Only 25 percent of those surveyed report that they currently use the relatively new cartridge tape systems. Forty-two percent of all respondents, however, plan to increase this means of storage in the next year.

The size of a company seems to have some effect on the migration to cartridge tape systems. Both small and large companies favor reel-to-reel systems by a wide margin, but five percent of small firms use cartridge tape compared to only .9 percent of companies with 1,000 or more employees. Little more than half of all respondents who use cartridge tape plan on keeping their systems intact. Forty-two percent, however, plan to increase cartridge use.

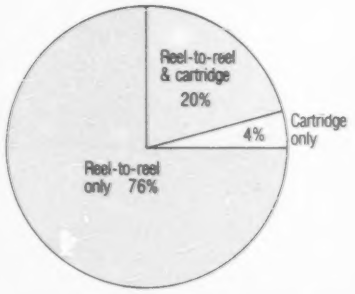
As may be expected, this increase will be at the expense of reel-to-reel systems, as only 15 percent of the users plan to increase this method of storage.

One question asked specifically about storage systems used for data backup. Disk-to-tape is the most widely used backup method, with 74 percent reporting its use. Five percent use a tape-to-tape system, while 15 percent use other methods, such as diskettes. Comments one reader: "Diskette backups are not fast, but they are very reliable. Some of our diskettes have been in use for 12 years and are still reliable."

Method Used for Storing Information



Type of Tape System Used



Several respondents are interested in learning more about storage and retrieval. One says his company is moving away from film and looking forward to image technology in the next few years. "Every little bit [of information] helps," writes another respondent. "Our interest is primarily in disk and tape storage."

One respondent seems angry at having been asked about micrographics: "Microfiche/microfilm is not a data processing concern as far as I am concerned." Perhaps this is indicative of the use of service bureaus and specialized departments to handle document storage. Counters another, however, "I believe that this area is extremely important. In fact, it reduces risk and the massive storage areas [needed] for computer runs." (15)

For more information on INFOSYSTEMS storage and retrieval survey, enter No. 12 on the Reader Information Card.

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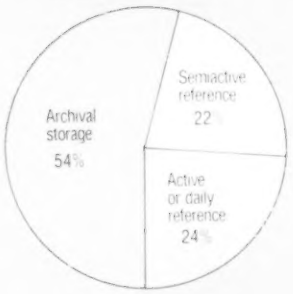

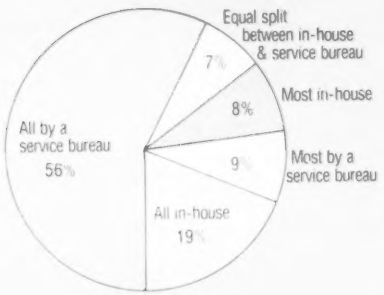
How Micrographics Needs Are Handled
All by a service bureau 56%
Equal split between in-house & service bureau 7%
Most in-house 8%
Most by a service bureau 9%
All in-house 19%

Continuing to Climb

The use of micrographics is up significantly since 1982 according to INFOSYSTEMS' Information Storage & Retrieval survey. While a minute percentage of companies are replacing current micrographics systems, the majority are choosing to maintain or expand present systems.

The survey also finds that spending on micrographics in 1987 is expected to escalate 15 percent over last year. The average expenditure on micrographics by firms in 1986 was $40,400. The projected expense per firm in 1987 is $46,300.

The main function of microfilm/fiche systems, representing more than half of all usage, continues to be archival storage. Twenty-four percent of the images stored are referenced on a daily basis and 22 percent are referred to semiactively, according to the survey.

The trend over the past five years has been toward greater use of microfilm/fiche. Projections for 1987 show increases to continue.

- Use of magnetic-media-to-film conversion will increase to 73 percent from 61 percent in 1982.
- Paper-to-film conversion will jump from six percent in 1982 to 46 percent in 1987.
- Storage of documents on microfilm/fiche has almost doubled from seven to 13 percent.

Other findings from the survey, however, project a marked decrease in the use of computer-output microfilm (COM). In-house usage was reported at seven percent for 1987. Twenty-two percent of the respondents turn to an outside service bureau for COM use. Eleven percent plan to use it within two years.

It is unlikely that new COM users will pick up the slack. The number of firms that do not have COM equipment and have no plans to implement it is projected to be 58 percent in 1987.

The handling of micrographics needs in the past five years has fluctuated between in-house systems and service organizations. "Microfilm/fiche remains to be used mainly through an outside bureau," says Ray Winkler, manager of market research at Hitchcock Marketing & Research Services, Wheaton, IL. "Only 19 percent handle all of their micrographics needs in-house."

Written comments from the survey show that attitudes toward and use of micrographics vary considerably. One respondent says his company plans to increase its use of micrographics. Another respondent writes that his company may try micrographics, while yet another says he is not familiar with the technology.

Comments one respondent: "The survey seems to be pointed at microfiche. I believe microfiche technology would be more widely used if aimed more at users (accounting, marketing, engineering) rather than to expect information systems to promote it." (IS)

Types of Micrographics Used
(by percent of respondents)

	1982 %	1983 %	1984 %	1985 %	1986 %	1987 %
Magnetic-media-to-film conversion (COM)	61	69	71	76	80	73
Paper-to-film conversion	6	7	4	4	36	46
Storage	7	7	7	9	37	13